Giving Voice to Choice: Integrating Scientific, Ethnographic, and Historical Analysis to Understand 17th Century Native Pottery from Western New England

Julie A Woods, University of Massachusetts - Amherst
Matthew T Boulanger
Elizabeth S Chilton, University of Massachusetts - Amherst
David V Hill
Michael D Glascock

Available at: https://works.bepress.com/julie_woods/1/
In addition to nine different paste groups, at least two vessel-construction techniques (sequential-slab and coiling) were used as temper. All other aplastics appear to be natural inclusions in the parent clay. Thin sections were prepared from 40 sherds. Nine distinct paste groups were identified in the sample. Petrographic Analysis

- Fort Hill (Hinsdale, NH 27CH85)
- Algonquian archaeological sites in the middle Connecticut River valley: minimal ethnographic data and historical documentation available.
- Tempered with fragments of muscovite
- Group 5
- Group 4
- 25-30% med.-coarse plutonic/metamorphic rock fragments; Traces of silt and very-fine sands.

Neutron Activation Analysis

Structural characteristics of neuron activation analysis are used to compare the chemical compositions of different materials. The analysis of these compositions can help identify the source of the materials, which can be useful in understanding the provenance of the artifacts.

Vessel Lot Analysis

The Vessel Lot Analysis is conducted to identify the clay sources and tempering materials used in the production of ceramic vessels. This analysis is done using neutron activation analysis, which allows for the identification of the chemical composition of the clay and tempering materials.

Discussion

Results of the original ceramic-analysis case study suggest that Middle Connecticut River Valley vessels were produced from a variety of clays and minerals, suggesting that native people were unrestricted in their acquisition of raw materials for ceramic production during the European settlement of the 17th century. Through a comprehensive raw-material survey, it has been noted that the interest in temper and rock fragments identified within the petrographic sample is likely available within the metamorphic terrain of the upper Connecticut Valley. The NAA data produced here demonstrate the existence of multiple geochemical groups within a fairly small geographic area, and within a fairly narrow window of time. Though some of this variability in composition may be attributable to low-distance exchange or transport from southern New England, further research is needed to assess whether the other compositional groups identified here are representative of geographically distant raw-material sources, or if they represent locally derived materials. The presence of shell-tempered vessels, somewhat rare during earlier periods in the Connecticut Valley, may result from the early contact trade in trade and economic relationships between coastal Algonquian-speaking peoples and the early European settlers.

Acknowledgments

Julie A. Woods, Matthew T. Boulanger, Elizabeth S. Chilton, David V. Hill, & Michael D. Glasscock

Petrographic Analysis

This section is prepared from the sherds. Nine distinct paste groups were identified in the sample.

- Group 1: 15-25% silt to very fine sands; Traces of medium-coarse plagioclase and metamorphic rock fragments.
- Group 2: 25-35% medium-coarse plagioclase and metamorphic rock fragments; Traces of silt and very-fine sands.
- Group 3: 3% silt to very coarse sands and metamorphic rock fragments; Fractures of sand particles.
- Group 4: 5-10% shell tempering.
- Group 5: <1% quartz, feldspar, and amphibole present.
- Group 6: Quartz in predominant aluminus.
- Group 7: Fragments of quartz, feldspar, and amphibole.
- Group 8: Tempered with fragments of muscovite.

LITERATURE CITED